CLAIM SUMMARY

1.   (Original)   A method of adjusting a simulator comprising:

inputting the data from a train into the simulator;

operating the simulator with the data; and

adjusting automatically parameters of the simulator until data of the simulator matches the data from the train.

2.   (Original)   A method according to Claim 1, wherein the parameters include one or more of grade resistance, curve resistance, rolling resistance, tractive effort of the train's locomotives, dynamic brake effort of the locomotives, pneumatic brake system, and train weight.

3.   (Original)   A method according to Claim 1, including analyzing the inputted data on the simulator after adjusting of the parameters.

4.   (Original)   A method according to Claim 3, wherein the analysis includes identifying anomalies in the inputted data and reporting the anomalies.

5.   (Original)   A method according to Claim 1, wherein adjusting the parameters includes comparing the simulator data and the train data during a change of velocity.

6.   (Original)   A method according to Claim 1, wherein the train data is from an event recorder on the train and adjusting the parameters includes comparing the simulator data and the event recorder data during one or more trip features including: curves, grades, braking and throttle changes.

7.   (Original)   A method according to Claim 1, wherein the train includes plural event recorders storing the train data and including inputting data from each of the event recorders into the simulator and operating the simulator and adjusting the parameters using the data from all the event recorders.

8.   (Original)   A method according to Claim 1, including providing a simulator on the train.

9.   (Original)   A method according to Claim 8, including storing the adjusted parameters with the data of the train on an event recorder on the train.

10.   (New) In a train having a processor including a train dynamic model and initial train parameters, the method for fine tuning the model includes:

    inputting real time measured train data from the train into the processor;

    running the train dynamic model with the initial parameters to produce modeled train data;

    compare the modeled train date and the measured train data; and

    adjusting automatically the train parameters of the model until modeled train data matches the measured train data.

11.   (New) A method according to Claim 10, wherein the parameters include one or more of grade resistance, curve resistance, rolling resistance, tractive effort of the train's locomotives, dynamic brake effort of the locomotives, pneumatic brake system, and train weight.

12.   (New) A method according to Claim 10, wherein adjusting the parameters includes comparing the modeled data and the measured data during a change of velocity.

13.   (New) A method according to Claim 10, wherein the measured train data is from an event recorder on the train.

14.   (New) A method according to Claim 13, wherein the adjusting of the parameters includes comparing the modeled data and the event recorder data during one or more trip features including: curves, grades, braking and throttle changes.

15.   (New) A method according to Claim 13, including storing the adjusted parameters with the data of the train on the event recorder.